

# NYFA Newsletter

New York Flora Association  
of the New York State Museum Institute

Vol. 2 No. 2

Co-Editors:

Richard S. Mitchell  
New York State Museum

Robert E. Zaremba  
The Nature Conservancy

July - 1991

## NYFA Council Officers Selected

### NYFA Council Officers (1991-1992):

Director: Steven Clemants

Secretary: Eric Lamont

Treasurer: Breta Sisson

State Museum Liaison: Richard Mitchell

State Museum Institute Liaison: Claire Schmitt

For details on new developments in the organization, see the article on the council meeting and proposed NYFA guidelines on page 5.

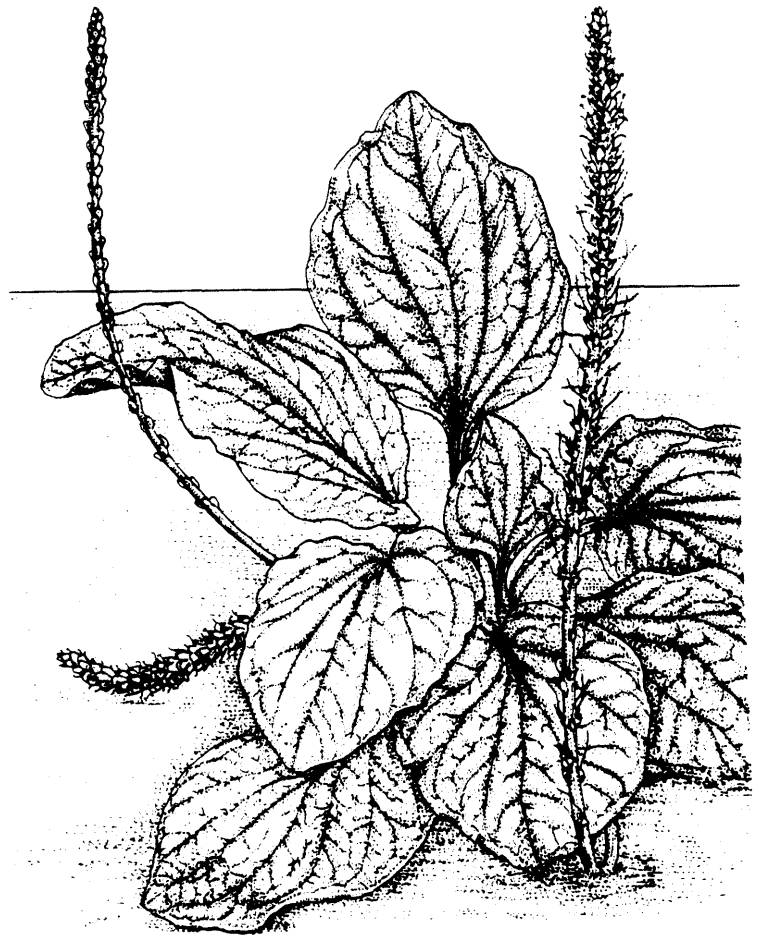
### Heart-leaf Plantain -- "King-root"

by Steven Clemants & Richard Mitchell

Plantains are most familiar to us as weeds. Some species, like *Plantago major* L., are very aggressive in gardens and will grow from cracks in sidewalks and parking lots. Native Americans called this plant "White-man's foot." This kind of reputation makes it hard to think of any plantains as unusual or exciting, but, in actuality, many of the 250 *Plantago* species worldwide are rare.

Heart-leaf plantain, *Plantago cordata* Lam., is a robust, handsome herb, with leaves up to the size of dinner plates, long, arching spikes of small, pale flowers, and a swollen base that emits a burp of gas when extracted from the substrate. It is also possibly the rarest North American plantain, considered a candidate for protection by the United States Fish and Wildlife Service under the Endangered Species Act of 1973. First reported nearly two centuries ago, this species has declined in the number of sites where it is known in recent years. It now grows in fewer than 100 sites in North America, of which New York is fortunate to have thirteen (including one of the largest colonies).

Among the rare plants of New York, heart-leaf plantain is special, because it has several known uses. Steyermark, in his *Flora of Missouri*, stated: "[the] young and tender petioles may be cooked as a vegetable, and of all the native plantains [it] is the



Heart-leaf plantain (*Plantago cordata* Lam.) In New York, these rare plants grow only on the gravelly, freshwater intertidal shores of the Hudson River.

most tender." And Tessene, in his study of the plant, told of finding a "Root-man", i.e. an herbalist, among the Potawatomi Indians of Ontario who knew the plant and took Tessene to a population. The herbalist called the plant "king-root" in reference to the distinctive, bulbous base. Among the uses he attributed to the species were: "healing of burns and

relieving of symptoms of sore feet when a tea of the roots is drunk." He also said that it is a particularly good cathartic.

Heart-leaf plantain is found in habitats that are highly susceptible to alteration or destruction by man. It usually grows in the gravelly or rocky beds of shallow clear streams, springs and adjacent floodplains. In New York, however, the plants grow on the freshwater tidal flats and banks of the Hudson River, where they are partially inundated for part of each day. The plants' swollen bases are usually found in gravelly soils that remain water-saturated, and they thrive only in areas that are periodically or seasonally flooded.

Until the late 1970's, when the U. S. Fish and Wildlife Service contracted the State Botanist's Office at the N. Y. State Museum to search out historical rare plant localities, the largest colony of heart-leaf plantain was reported to be of a few hundred individuals located on the shore of the Hudson River in Columbia County, NY. When Richard Mitchell (of the museum) and Beth Yanuck (then employed by The Nature Conservancy) visited that site, their further exploration of the area revealed over 3,200 plants at a nearby location in the intertidal zone. Surveys by Natural Heritage Programs in the midwest later revealed large populations there as well, but recent studies in the midwest and southeast have shown that many sites where the plantain once grew have been destroyed. Streambeds where it grew have been polluted or rechanneled, and upstream disturbance has caused the streams to simply dry up in some cases. Of the 31 historical occurrences of heart-leaf plantain in New York, surveys by botanists have reconfirmed thirteen. The 18 unconfirmed sites either have vague locational information or they have been destroyed by pollution, development, or other habitat alterations on the Hudson River. Most of the thirteen confirmed sites in New York are in need of more protection.

The heart-leaf plantain holds more promise than most rare plants for possible use in new foods and medicines, but it should not be saved for practical reasons alone. It is a part of the diversity of our natural heritage that can receive the protection it needs to survive only through cooperative efforts among state, local, and private groups like our own.

Steven E. Clemants, Brooklyn Botanic Garden  
Richard S. Mitchell, N.Y. State Museum

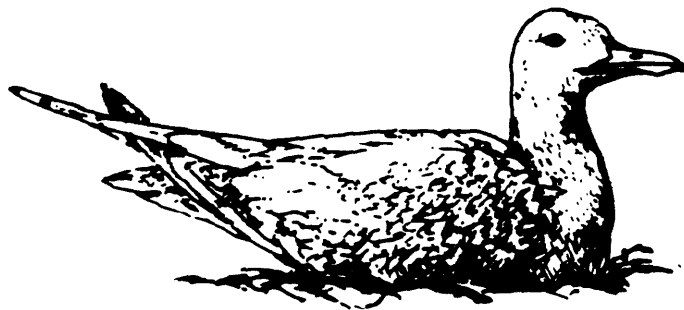
## Plant Hunting Among the Gulls on South Dumpling Island --

by Gordon Tucker and Edwin Horning

Taking a brief diversion from our work on the flora of Fishers Island, Suffolk County, we journeyed by lobster boat one mile north to South Dumpling Island, midway between Fishers Island and the Connecticut coast. This 2.6 acre island is owned by

the Mashantucket Land Trust, and supports large nesting colonies of gulls, egrets, glossy ibises, and herons. The island is a small, flat-topped mound of glacial rock and gravel, rising about 10 m above sea level. The outer slopes are steep (30-45 degrees), except at the east where it is more gradual.

Stepping ashore we were greeted by the raucous calls of gulls circling overhead, while their buff-colored offspring scurried for cover behind the nearest rock or bush. The stony or rocky beaches are thinly vegetated with just a few herbs, especially bindweed (*Polygonum convolvulus*) and charlock (*Raphanus raphanistrum*). There is a small salt marsh community among the half submerged boulders just off the south point, dominated by salt-meadow grass (*Spartina alterniflora*).



A grove of basswoods (*Tilia americana*) covers most of top of the island, except at the eastern point, where there is a thicket of sassafras (*Sassafras albidum*). We found one tree of black oak (*Quercus velutina*) and one white oak (*Quercus alba*), along the south shore. There was also one small red maple (*Acer rubrum*) among the basswoods, and one black cherry (*Prunus serotina*) that was nearly overcome by tent caterpillars. Every tree seemed to have one or more egret or heron nests. The edges of the wooded grove supported several shrub species, notably smooth sumac (*Rhus glabra*) and some herbs, the cow parsnip (*Heracleum lanatum*) being especially plentiful. There was a dense stand of reed grass (*Phragmites australis*) on the southwest shore of the island, where the soil was not wet or even damp, since there had been no rain in a month at the time of our visit.

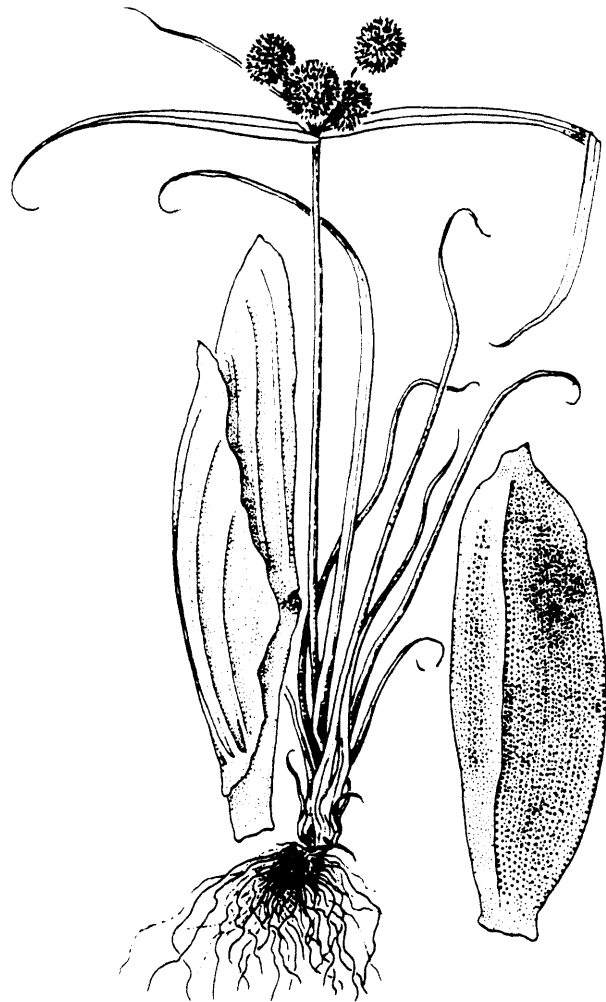
The total island flora so far recorded is 62 species (we made collections of all plants then in flowering or fruiting condition). For comparison, Fishers Island has about 700 species of vascular plants, and the adjacent portion of Connecticut (New London County) has about 1400 species. The only rare species on South Dumpling is seacoast angelica (*Angelica lucida*, NYNHP rank S1). There are about 20 plants, ranging from seedlings to flowering individuals. All species seen on the island also occur on nearby Fishers Island, with two exceptions: *Elymus villosus* and *Vitis aestivalis*.

List of Plant Species for South Dumpling Island

*Acer rubrum*  
*Ambrosia artemisiifolia*  
*Ammophila breviligulata*  
*Angelica lucida*  
*Apios americana*  
*Atriplex patula*  
*Bromus tectorum*  
*Cakile edentula*  
*Calystegia sepium*  
*Capsella bursa-pastoris*  
*Celastrus orbiculata*  
*Chenopodium album*  
*Chenopodium ambrosioides*  
*Dactylis glomerata*  
*Elymus villosus*  
*Geranium maculatum*  
*Heracleum lanatum*  
*Lathyrus japonicus*  
*Linaria canadensis*  
*Lonicera morrowii*  
*Oenothera biennis*  
*Panicum clandestinum*  
*Panicum virgatum*  
*Parthenocissus quinquefolia*  
*Phragmites australis*  
*Phytolacca americana*  
*Poa annua*  
*Polygonum convolvulus*  
*Polygonum persicaria*  
*Portulaca oleracea*  
*Prunus serotina*  
*Pteridium aquilinum*  
*Quercus alba*  
*Quercus velutina*  
*Raphanus raphanistrum*  
*Rhus copallina*  
*Rhus glabra*  
*Rhus typhina*  
*Rosa carolina*  
*Rosa rugosa*  
*Rumex verticillatus*  
*Salsola kali*  
*Sambucus canadensis*  
*Sassafras albidum*  
*Scrophularia marilandica*  
*Smilacina racemosa*  
*Smilacina stellata*  
*Smilax herbacea*  
*Smilax rotundifolia*  
*Solanum dulcamara*  
*Solanum ptychanthum*  
*Solidago sempervirens*

*Sonchus asper*  
*Spergularia rubra*  
*Stellaria media*  
*Teucrium canadense*  
*Thalictrum pubescens*  
*Tilia americana*  
*Toxicodendron radicans*  
*Viola sororia*  
*Vitis aestivalis*

Gordon C. Tucker, Biological Survey, New York  
 State Museum, Albany, New York 12230  
 Edwin H. Horning, H.L. Ferguson Museum, Fishers  
 Island, New York 06390



*Cyperus echinatus* (L.) Wood (*C. ovularis*), a rare flatsedge ranked S1 and Endangered in the State.

A Rare Plant Hot-spot in the Bronx --

David S. Küntler

It's called The Meadow, and it lies within New York City's largest park, Pelham Bay Park, covering 2,764 acres in the northeast corner of the Bronx. It is a rounded, 25-acre wet meadow that lacks major trails and is visited by few people, in stark contrast with Orchard Beach, an adjacent area that attracts about a million visitors annually. The creation of Orchard Beach and the filling of Pelham Bay behind it for a parking lot was Robert Moses' first big project as NYC Park Commissioner in the 1930's. The nearby area now known as The Meadow was formerly a pasture, but fill was removed from the site almost down to the water table in a rather even fashion, such that the topography appears fairly natural today. The area is surrounded by weedy fields, some forest and a few low bedrock rises; it burns almost every year.

A prominent feature of The Meadow is about a three acre, east-west trending swath of nearly pure gamma grass (*Tripsacum dactyloides*). This species is

restricted within the state to the New York City and Long Island areas. Fires are usually set in the old, dry gamma grass (illegally) each year by school children on break. Points north and south of the *Tripsacum* often burn as well, putting a check on bayberry (*Myrica pensylvanica*), northern arrowwood (*Viburnum recognitum*) and young tree growth. One threat to the opening is the occurrence of stands of non-native white poplar (*Populus alba*) that spread along the southern border, but these are periodically cut and sprayed with herbicide by a park restoration crew.

The *Tripsacum*, incidentally, is the only known host plant for a moderately small, but handsome, boring noctuid moth, *Amphipoea erepta ryensis*. The larva tunnels into the base of the culm of the large, corn relative and kills the stem by late May when the larva leaves to pupate. Some small fruit-fly species (Tephritidae) may, in turn, depend on the *Amphipoea* larva for their existence.

Common plants in the meadow are switchgrass (*Panicum virgatum*), blackberries and roses, and a number of native plants well-known in open, moist areas, including Indian hemp, sensitive fern and a variety of goldenrods and other fall composites. Woody plants found in some parts of The Meadow are pin oak (*Quercus palustris*), black cherry, dogwoods, willow and sumacs. Aggressive non-native species are not a big problem. Reed (*Phragmites australis*) grows in a relatively small stand in a corner of the meadow, Japanese knotweed (*Polygonum cuspidatum*) dominates another corner, and purple loosestrife (*Lythrum salicaria*) is present throughout, but does not currently dominate any site.

#### Rarities of "The Meadow"

Several rare species were found during a New York Natural Heritage Program survey of The Meadow during 1987. Purple milkweed (*Asclepias purpurascens*, ranked S2 by NYNHP, threatened in the state) is present in a single stand of 15 plants, ten of which flowered this year. Flowering does not guarantee seed-set, which does not occur every year, but the colony seems to propagate by seed, and has "shifted" in location twice over the past few years.

Near the milkweed colony, a single individual of the rare flat-sedge *Cyperus echinatus* (also called *C. ovularis*) was found, and on the same day several other plants were located on the other side of the park. It is a New York state endangered species with the most critical rank of S1. This sedge was not seen again until this past June. Another rare species, Bush's sedge (*Carex bushii*), ranked S2 and rare in the state, maintains a few fairly strong stands in The Meadow. Since 1987, another state rarity has been located, a small, showy stand of slender blue flag (*Iris prismatica*) ranked S2 S3.

My most significant find was made in early June of this year, when I collected one individual from a population of over 200 rushes with small, round flowering heads (glomerules) that looked unfamiliar and rather attractive. It turned out to be short-fruited rush (*Juncus brachycarpus*), a species last collected in New York in 1943. It was formerly known in the state only from Nassau and Suffolk counties on Long Island, so my collection was a Bronx county record. While the plants seemed healthy and secure at the time, a new path was cut through the colony only days after its discovery. The trail has been brushed over to discourage trampling, and the plants are recovering; even affected plants seem to be able to produce some fruit this year.

There are perhaps a number of reasons why there is a concentration of native and rare plants in The Meadow, even though it had an artificial origin. The fact that it was created by subtraction, leaving parent materials intact is positive factor, and with the rarity of large expanses of meadow in the region, native meadow plants surviving in small moist habitats have been given a significant open habitat to invade. Fire also plays an obvious part in maintaining the situation as well as in selection for and against certain species. Species such as the rare *Asclepias*, *Cyperus*, *Carex* and a number of other native plant species of Pelham Bay Park are near the northern limits of their distribution ranges in coastal New York and New England, and they are even rarer due to the effects of the human population that has overwhelmed the New York City region. While eastern Long Island would seem a more promising area in which to search for plant rarities, The Meadow and salt marshes of Pelham Bay Park at the western end of Long Island Sound continue to offer botanical surprises.

David S. Künstler, Wildlife Mgmt. Specialist, NYC  
Dept. of Parks & Recreation, Van Cortlandt &  
Pelham Bay Parks Administrator's Office, Bronx  
River Parkway, Bronx, NY 10462

#### PLEASE HELP ME FIND: *Mollugo cerviana*.

It looks something like *M. verticillata*, except bunchier, with almost linear leaves and flower clusters on occasional stalks from the leaf axils. Reported from NY City ballast early in the Century, and one hybrid (?) specimen from Suffolk Co. Your reward will be fame, but alas not fortune. Call Dick Mitchell at (518) 486-2027.

## Second NYFA Field Trip and Annual Meetings to be on Long Island (See page 12!)

since we are committed to uphold those of the parent organization, the New York State Museum Institute, which is officially chartered as a not-for-profit organization by the State of New York.

The following guidelines are presented for your approval and/or comments for changes. If you feel that we should hold a ballot on this, or if you have any other suggestions, please let the council know.

## PROPOSED NYFA GUIDELINES

### Article 1

#### NAME

*Section 1.* The name of this association shall be: New York Flora Association (NYFA).

### Article 2

#### NYS MUSEUM INSTITUTE

*Section 1.* The New York Flora Association (NYFA) is organized under the By-Laws of the New York State Museum Institute (Article II, sec. 1c). NYFA is governed by the By-Laws of the NYS Museum Institute and is accountable to the NYS Museum Institute Board of Trustees.

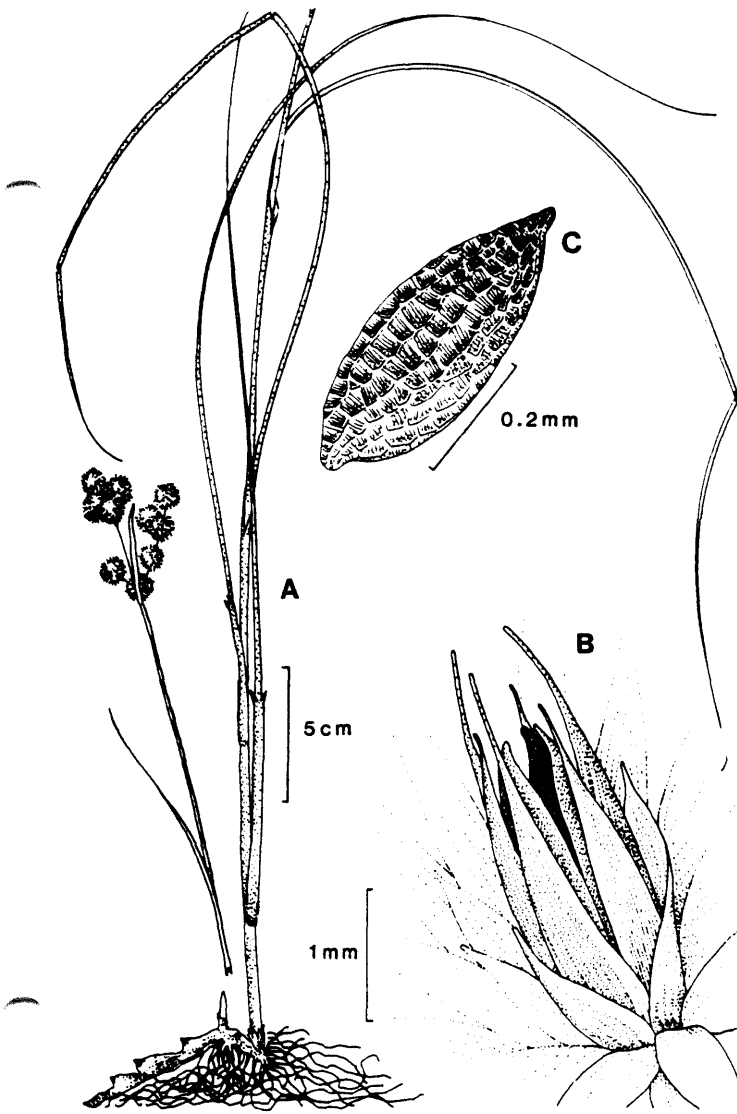
*Section 2.* No act of NYFA or its council shall be in conflict with the NYS Museum Institute By-Laws. If there is a conflict, the By-Laws of the NYS Museum Institute are to be followed. If NYFA disbands, all non-dispersed funds will go to the NYS Museum Institute.

### Article 3

#### PURPOSES

*Section 1.* The New York Flora Association is dedicated to the promotion of field botany and a greater understanding of the plants that grow wild in New York State. The goals of the organization are:

- a) to promote the study of New York State's native and naturalized plant life;
- b) to encourage the production of botanical publications that are educational to the public and beneficial to the scientific community;
- c) to provide an umbrella organization for field and herbarium botanists that can represent their points of view;
- d) to serve as an information exchange for botany clubs and botanists active in New York State, and to foster the pursuit of common interests;
- e) to gather information and voucher specimens leading to a complete atlas of New York state plant distributions;
- f) to develop "ecological profiles" of native and introduced plant species to aid in our understanding of their distributions and interactions; and
- g) to promote conservation and wise management of native plant resources and natural communities



*Juncus brachycarpus* Engelm. (S1, Endangered) A rush so rare in New York that its recent collection in Pelham Bay Park was the first record in 48 years.

### NYFA Council to Direct the Organization

The NYFA "Advisory Council," nominated by you, the membership, met April 27, 1991, and made some important decisions. The council unanimously voted itself to be the body that will direct NYFA's activities and expenditures. Proposals were also considered on how make the organization run in a democratic fashion, now that initial stages of its development have proceeded successfully. Election of council officers was then held, selecting from the ten (of 12) members present. On resigning their temporary posts as co-directors of the organization, Richard Mitchell and Robert Zaremba were then voted in as full members of the council.

It was decided that the Flora Association needed guidelines, and the newly elected chairman, Steven Clemants offered to develop these with the help of the council and other NYFA members. It should be made clear that NYFA can not have official by-laws,

**Article 4  
NYFA COUNCIL**

*Section 1.* The NYFA council shall have full power to manage the association including the power to make financial decisions, assign duties, create committees, appoint a Field Trip Coordinator, Newsletter Editor, and Corresponding Secretary and to delegate authority as needed.

*Section 2.* The council shall be composed of no fewer than 7 members and no more than 15. Terms shall begin April 1 and last for 3 years. Elected council members may serve no more than six consecutive years.

**Article 5  
OFFICERS**

*Section 1.* The NYFA officers are: Chairman, Secretary, Treasurer, NYS Museum Institute Liaison, and NYS Biological Survey Liaison.

*Section 2. Chairman--*the chairman is the chief representative of NYFA; this person shall call council and annual meetings and chair them. The chairman must be a resident or work in New York State.

*Section 3. Secretary--*the secretary shall take minutes at the council and annual meetings and take on the duties of the chairman, if the chairman is unable to perform his or her duties.

*Section 4. Treasurer--*the Treasurer shall maintain contact with the NYS Museum Institute financial officer and report to the council and members on the financial status of the association. The treasurer shall have knowledge of all disbursements and acquisition of funds.

*Section 5. NYS Museum Institute Liaison--*The Liaison shall maintain communications with the Museum Institute. The liaison is not elected, but appointed by the NYS Museum Institute.

*Section 6. Biological Survey Liaison--*The liaison shall maintain communication with the Biological Survey. The liaison is not elected, but appointed by the Chief of the New York State Biological Survey.

*Section 7.* All officers shall be voting members of the council. Officers (except the liaisons) shall serve for a term of 2 years. The Chairman and Secretary may not be elected for a second consecutive term.

**Article 6  
ELECTION**

*Section 1.* Elections shall be held every fall by mail ballot (sent before the fall meeting). The council shall resolve all ties by a vote.

*Section 2.* A Nomination Committee appointed by the Chairman shall draw up a slate of officers and Council members. The general membership may submit names for consideration to the nomination committee or write in names on the ballot.

*Section 3.* In case of vacancies, the Chairman shall appoint someone to fill this position (if necessary) until the next election.

**Article 7  
MEETINGS**

*Section 1.* The Association shall hold a Council meeting in the early spring, an annual meeting in the fall, and two field trips each year. There shall be no charge for field trips beyond actual expenses.

**Article 8  
MEMBERSHIP**

*Section 1.* Membership is open to anyone. To obtain membership write to the corresponding secretary with initial membership dues. To retain membership a member must send in the annual dues by Oct. 1. Dues received after Oct. 1 will be applied to the following year. If annual dues are not received by Oct. 1, the member shall be considered inactive and excluded from voting.

**Article 9  
AMENDMENTS**

*Section 1.* Amendments to these guidelines must be passed by a 2/3 majority of the Council and 2/3 of votes cast by the membership. If amendments are rejected by the council, they will be brought to the membership and if passed by 2/3 of the voting membership in two consecutive years, the amendments will be adopted.

**Share Your Botanical Experience and Knowledge with Us --**

I was dismayed to learn from at least two NYFA members that they don't feel qualified to write for the newsletter. All of you have jewels of information and experiences well worth printing, so please don't be shy about sharing your botanical life. It's your club, and we welcome participation from anyone who can enlighten, entertain or inspire us in any way to get out and learn more about the flora. I'd also like to run a column in which your editorial comments are aired. Opinions? Insights? Send them to me (Dick Mitchell) at 3132 CEC, Albany, NY 12230

**Special Thanks to NYFA Member Ted Grisez, a Pennsylvania resident who sent the museum 93 fine plant specimens collected in Chautauqua County, New York. These were especially appreciated, since that area is further out in the wilderness of the western frontier than some of us have dared to go.**

## Seabeach Amaranth (*Amaranthus pumilus*) in New York State --

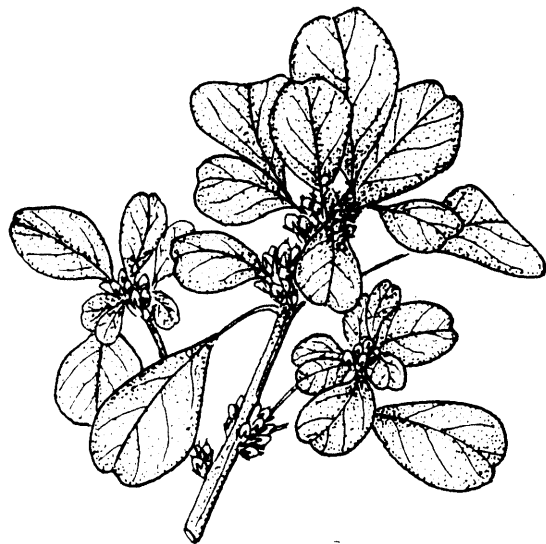
by Christopher Mangels

In the summer of 1990, an interesting rare plant was unexpectedly rediscovered along Long Island's ocean beaches. Despite searches for it over the past several seasons botanists from the Heritage Program and The Nature Conservancy, *Amaranthus pumilus* Raf. (seabeach amaranth) had not been reported in the state for over thirty years. Prior to the summer of 1990, in fact, no extant populations of the elusive species were known in the world, outside of North and South Carolina.

The rediscovery was the result of the sharp eyes and inquisitive mind of a Long Island Conservancy shorebird volunteer, Sal Battaglia. After spotting a few small plants that Sal suspected of being the rare amaranth, he contacted the Conservancy, and the identity of the plants was quickly confirmed. This, by the way, came after modest yet ultimately effective efforts by fellow NYFA member Robert Laskowski and me, to motivate amaranth searches by frequent beachcombers by providing them with a description of the plant.

Within weeks of the first find, an island-wide search was mounted by the Heritage Program and TNC's Long Island chapter. This included visits to all the historic localities, as well as certain other places that seemed appropriate hunting grounds, such as inlets. In all, botanists Steve Clemants, Bob Zaremba, and I located thirteen populations from Queens, Nassau and Suffolk Counties. These populations varied greatly in size, and the total number of individuals (well under 500) was small considering the amount of potential habitat. Over a hundred miles of coast was available, much of which was inspected by us.

*Amaranthus pumilus* is an annual, as are most members of the pigweed family, and, in fact, most herbs of maritime environments. Its branched, prostrate habit and rounded, reduced, and decidedly fleshy leaves, distinguish it at a glance from its more familiar relatives, the common pigweeds and cultivated amaranths, which are comparatively tall growers with a coarse, leafy appearance. A low growth form and succulence are shared features of many unrelated beach plants, seemingly necessitated by the unusually windy and desiccating conditions of their habitats. The inflorescences, also reduced in comparison to the long, bracteose structures of more typical pigweeds, consist of clusters of rather unimpressive flowers near the stem apices or lower leaf axils, giving the plant a very modular aspect. This distribution of flowers on the plant, along with essentially indeterminate growth (both terminally and laterally) appear to provide the plant with an ability to cope with sand deposition. The fruit is a fleshy utricle with roughly the look of the fruit of Japanese



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*Amaranthus pumilus* Raf. A rare, possibly "fugitive" species of New York's Long Island beaches. Did it reappear there as a result of a Carolina hurricane?

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barberry (*Berberis thunbergii*), though somewhat smaller. The plant's overall coloration is a mixture of dark green (on adaxial leaf surfaces), pale green with a greyish indument (abaxial leaf surfaces) and bright red (the stems and fruits).

The geographic range of *A. pumilus* is restricted to the mid-Atlantic coast, historically from Rhode Island to South Carolina. Moreover, it is known almost exclusively from barrier islands. Its essential habitat is along ocean beach areas within occasional reach of the tides. In New York State it tends to be found away from well-developed and stable dune systems, appearing to have an affinity for inlets, storm washouts, and other rapidly eroding or accreting shorelines, sometimes precariously close to the surf.

Seabeach Amaranth belongs to an assemblage of species that inhabit wrack or drift lines, characterized by other more common species, such as sea-rocket (*Cakile edentula*) and seaside spurge (*Chamaesyce polygonifolia*). Seabeach knotweed (*Polygonum glaucum*) is another associate which, though it can be locally abundant on Long Island, is also a species of Heritage interest because of its limited global range. In general, these plants produce water-borne seeds or fruits, whose typical fate is to get deposited on the beach, along with other flotsam, in fairly continuous lines corresponding to tidal maxima. Aside from a common dispersal agent, the coincidence of plants and wrack material, e.g., eelgrass and wood, may be due to in part to more favorable conditions afforded them by such material; this may be particularly important during their earlier stages of growth.

*Amaranthus pumilus* may be a prime example of a "fugitive species," a term applies to a species whose spatial or geographic distribution follows an erratic

pattern (compared to an ephemeral species which, while often occupying the same site, fluctuates in its abundance and apparent presence over time). Its fugitive behavior is clearly related to three factors: the fact that it is an annual, the dynamic nature of its beach habitat and its apparent dependence on tides for dispersal. While the Carolina beaches have supported populations over many years, the absence and sudden reappearance of the amaranth might be a natural phenomenon in this part of its range.

Alternatively, its presence may be due to unusual tidal conditions, or to some chance event, for instance Hurricane Hugo, the timing of which may be more than coincidental (it hit the Carolina coast in late 1989).

At the local level, changing habitat conditions as well as human activities may favor, hinder, or even preclude its presence at certain times. Storm tides, which cause washouts that people tend to view only as harmful, property-threatening events, can create a suitable seed bed area for the amaranth to colonize. On the other hand, the raking or "grooming" of beaches to remove trash also removes natural wrack material, which may result in a less hospitable environment for amaranth seedlings, or may actually remove the ungerminated fruits. Perhaps most significantly, heavy foot and vehicle traffic can result in trampled or uprooting of plants in long stretches of beach virtually devoid of vegetation.

In summary, this species is remarkable, both in its ability to establish and to handle the harsh environmental conditions encountered on an ocean beach: extreme dryness, baking sun, high winds, shifting and abrasive sand and potentially sweeping tides. The threats posed by an increasingly mobile human population with a seemingly insatiable appetite for intensive beach use, may, however, be the greatest challenge this species faces, at least in New York state. Hopefully we will be able to ameliorate these aspects of the seabeach amaranth's beach-going existence so that Long Island will continue to be one of its refuges.

### **Significant Botanical Discoveries Documented by the New York Natural Heritage Program in 1990.**

by Stephen Young

The New York Natural Heritage Program is a cooperative effort between the New York State Department of Environmental Conservation and The Nature Conservancy. Our goal is to establish and maintain up-to-date inventories on the location and status of New York's rarest animal and plant species and the rarest and highest-quality examples of all natural communities. We receive information on botanical discoveries through Natural Heritage inventory work, from Nature Conservancy chapters, botanical societies, universities, museums and other

professional and amateur botanists. I would like the members of the New York Flora Association to notify me of any discovery of rare species that have not been seen in the state or at specific sites in last ten years. Natural Heritage can provide lists of historical species in your area with background information on location and habitat. If you would like a list, please write to me at the address listed below and specify the area you would like covered. We can sort information by county, town, watershed, ecoregion, Conservancy chapter or DEC region.

Below are the finds from 1990. It was a good year for rediscovery of "historical species" (designated SH by our system) with eleven species found. The 1991 searches are going well and some interesting finds have already been made.

*Amaranthus pumilus* - G2 SH - Relocated in various sites on Long Island. Last seen in 1950 (see the article by Mangels above).

*Aplectrum hyemale* - G5 SH - Found by Bob Zaremba in Washington Co. in September. Last collected in 1959 near Albany.

*Arabis missouriensis* - G4G5 S2 - Found at the summit of Mt. Defiance near Ft. Ticonderoga by Jerry Jenkins where it was last collected in 1935.

*Asclepias viridiflora* - G5 S2 - rediscovered by Carole Neidich-Ryder in September, 1990, Hempstead Plains, L.I.

*Carex capillaris* - G5 SH - Found in the Hudson River Gorge by Jerry Jenkins. Historically known from 2 sites in Central NY. Last seen in 1896.

*Carex striatula* - G5 SH - Found at West Point by Steve Clemants in May. Last collected in 1916 on Long Island. Only a few historical collections known.

*Carex straminea* - G5 SH - Found at West Point by Steve Clemants in June. Last seen in 1977 near Canandaigua Lake.

*Carex venusta* var. *minor* - G4T3T4 SH - Specimen identified from a 1985 survey to Fire Island National Seashore by Bob Zaremba.

*Eleocharis caribaea* - G4G5 S- Found in the Albany Pine Bush in October by Carol Reschke. This is a new record for New York state. Gordon Tucker is working on its taxonomic relationship to *Eleocharis geniculata*.

*Erechtites hieracifolia* var. *megalocarpa* - G5T? SH - Found on North Fork of Long Island by Chris Mangels and on Fishers Island by Gordon Tucker. It was reported 40 years ago from Fishers Island and appears in Gray's Manual, listed for Long Island.

*Erigeron hyssopifolius* - G5 SX - Found in the Hudson River Gorge by Jerry Jenkins and Peter Zika. Only one historical site known, in Ausable Chasm, last seen by Charles Peck, probably around 1900.



*Festuca saximontana* - G5 SH - Found on Wallface Mt. by Peter Zika in June. Last seen in 1949 by Stanley Smith.

*Lycopodium rubellus* - G5 SH - Found in two sites in West Point by Steve Clemants in June. Last reported from Cunningham Park on Long Island in the late 70's.

*Oenothera oakesiana* - G3?Q SH - Rediscovered at two sites on Long Island by Bob Zaremba in September. There are 26 historical records with the last sighting in 1974.

*Primula mistassinica* - G5 S2 - Found by Al Schotz at Wagener Glen in Steuben County; it was last seen at that location in 1942.

*Scirpus maritimus* - G5 SH - Documented from previous sightings at Fox Ridge Salt Marsh and Carncross Salt Pond north of Cayuga Lake in July by Bob Zaremba. Last seen in NY in Buffalo in 1981 and Syracuse in 1945. Bob saw some in VT just across from Ft. Ticonderoga in 1988.

*Solidago rigida* - G5 S1 - Found along the Niagara River in Tonawanda by Al Schotz in a site where it was last seen in 1924.

*Verbesina alternifolia* - G5 S1 - Found for the first time on Long Island by Bob Zaremba in the Thorne Preserve in August.

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## Remembering Joe Beitel (1951-1991)

by Robert Zaremba

Joe was an excellent botanist and a good friend. When I first arrived on Long Island in 1984 to document occurrences of rare plants, I asked whoever I met, "Who are the important botanical authorities on Long Island?" Everyone I asked mentioned Joe. Within a couple of months, Joe had shown me Big Reed Pond, Napeague, Cranberry Bog, and the Carmans River, sharing information on a dozen rare plant sites.

Joe was generous with information, as all good scientists should be. He was a link to our botanical past through Cooley and Helms to Wilcox, Latham and Raynor, and more distantly to Ferguson, Miller and Young. We must always remember that so much that we know and care about botanically comes from the accumulated work of botanists who cared about distributions, habitat, and conservation, and who left their knowledge on specimen labels, as discussions, and shared information on field trips. Joe was particularly good at these things.

He was a great teacher at the New York Botanical Garden, in short courses for the Long Island Botanical Society, and with other botanical groups. He was patient and eager to tell what he knew. I think I enjoyed those workshops with Joe as much to experience his enthusiasm as to learn the

plant groups.

I never did learn much about ferns. Joe made my head spin after a couple of descriptions of *Dryopteris* hybrids, and it was all too easy to bring Joe a nasty fragment of a fern or lycopod and have him willingly put a name to it.

At one time, I regularly called Joe late in the evenings, when I usually found him in his office, to talk about places, people, and, of course, plants. He always had time, despite being a very busy, over-committed person.

Joe annotated the collected ferns of New York and was our leading authority in Southern New York on what he *never* called lower plants or allies. His interest in our flora was by no means limited to ferns and lycopods. Joe and his father found one of the sites for *Agalinis acuta*, a species which is now federally listed as endangered. He organized the first early-August orchid tour of eastern Long Island; it has now become a popular annual LIBS event.

Joe was gentle and easy to get along with, but he had strong opinions about developers, conservation, people and plants. As Skip Blanchard has said "Joe didn't exactly walk on water, but he certainly walked in a lot of water." I miss him. We will miss him. I suppose I'd better learn the ferns now.

## Mr. Roberts' "Skunk Cabbage"

by Eugene C. Ogden

A number of years ago, Kenneth Roberts, a famous Maine author, decided to write a book entitled "Good Maine Foods," in which some edible wild plants, including skunk cabbage, would be included. To test its palatability, he gathered leaves of what was locally called skunk cabbage and prepared it as he might cook other greens. He took only one bite, but found it too bitter. His wife refused to try it. His niece tasted it but spit it out. She became ill but soon recovered. Mr. Roberts became violently ill, and his doctor thought for awhile that he would not survive. So when a letter was printed in a Boston newspaper saying that skunk cabbage was abundant in the area and suitable for early spring greens, Mr. Roberts wrote to the editor, recounting his ordeal. This scared the editor, who wrote in a black-bordered box on the front page: "Do not eat skunk cabbage. See editorial page." He there printed Mr. Roberts letter.

One of my students, who hailed from Boston, brought me the paper. I wrote to Mr. Roberts, saying it appeared obvious that he had eaten *Veratrum viride*, a violent poison, which some of my Maine students called "skunk cabbage", rather than *Symplocarpus foetidus*, an unrelated plant that is edible and harmless. He answered saying "That's what it was, all right, but heaven help everybody if people try what is called skunk cabbage around here." He then wrote to the newspaper about his

error, and the editor assured its readers that it was all right to eat real skunk cabbage again. Dr. E. D.

Merrill told me that he also wrote to Mr. Roberts, saying "Put not your faith in common names."



### Report on the 4th Semi-annual NYFA Field Trip: Hudson River, South of the Glen --

by Robert Zaremba

On June 22, 1991, the New York Flora Association held its 4th botanical field trip-- to the area called "South of the Glen" just north of Warrensburg, New York. Over thirty botanists from New York and New England met to botanize a winding section of the Hudson River where ice accumulates during spring run off and scours the river margins eliminating most trees and shrubs. Piles of ice create rafts up to 30 feet tall, that jam the channel and shear the lower limbs of shoreline trees. Blocks of ice lofted into the woods sometimes don't melt until late in May, reducing the length of the growing season. Sections of the riverside ice meadows are alkaline due to the presence of veins of

marble, while other sections are acidic.

During the visit, we saw nine state-ranked rare plant species (marked on the list with an asterisk), including *Viola novae-angliae*, *Tofieldia glutinosa*, and *Scirpus clintonii*. It was an ideal botanical day, during which we recorded 243 taxa for the four sites visited, including Snake Rock, a picturesque location featuring a large boulder and broad ice meadow.

The following is a list of species seen during the field trip. It was compiled from lists made by Evelyn Greene, Robert Duncan, Bruce Sorrie, David Hunt, Barbara Conolly, Betty Lotowycz and me. Species of questionable identity are listed with a "?".

Robert Zaremba, TNC, New York Regional Office, Albany

Species List: NYFA Field Trip to South of the Glen, Warrensburg, NY, June 22, 1991.

<i>Acer saccharum</i>	<i>Carex vesicaria</i>	<i>Juncus brevicaudatus</i>
<i>Achillea millefolium</i>	<i>Carex viridula</i>	<i>Juncus effusus</i>
<i>Agropyron trachycaulum</i>	<i>Ceanothus americana</i>	<i>Juncus marginatus</i>
<i>Agrostis perennans</i>	<i>Centaurea maculosa</i>	<i>Juncus nodosus</i>
<i>Juncus incana</i> ssp. <i>rugosa</i>	<i>Cicuta bulbifera</i>	<i>Lepidium campestre</i>
<i>    nus viridis</i>	<i>Cladium mariscoides</i>	<i>Lespedeza capitata</i>
<i>Amelanchier canadensis</i>	<i>Clematis virginiana</i>	<i>Leucanthemum vulgare</i>
<i>Amelanchier humilis</i> (?)	<i>Comandra umbellata</i>	<i>Lilium philadelphicum</i>
<i>Amelanchier stolonifera</i>	<i>Comptonia peregrina</i>	<i>Linaria canadensis</i>
<i>Andropogon gerardii</i>	<i>Cornus amomum</i>	<i>Ludwigia palustris</i>
<i>Anemone canadensis</i>	<i>Cornus rugosa</i>	<i>Luzula multiflora</i>
<i>Anemone virginiana</i>	<i>Cornus sericea</i>	<i>Lycopus americanus</i>
<i>Antennaria neglecta</i>	<i>Corylus americana</i>	<i>Lycopus virginicus</i>
<i>Apios americana</i>	<i>Cyperus strigosus</i> ( <i>dentatus</i> ?)	<i>Lysimachia ciliata</i>
<i>Apocynum androsaemifolium</i>	<i>Danthonia spicata</i>	<i>Lysimachia quadrifolia</i>
<i>Apocynum cannabinum</i>	<i>Deschampsia cespitosa</i>	<i>Lysimachia terrestris</i>
var. <i>cannabinum</i>	<i>Desmodium canadense</i>	<i>Lythrum salicaria</i>
var. <i>hypericifolium</i>	<i>Diervilla lonicera</i>	<i>Matteuccia struthiopteris</i>
<i>Apocynum x medium</i>	<i>Drosera intermedia</i>	<i>Medicago lupulina</i>
<i>Aquilegia canadensis</i>	<i>Dulichium arundinaceum</i>	<i>Melilotus alba</i>
<i>Aralia hispida</i>	<i>Echium vulgare</i>	<i>Mimulus ringens</i>
<i>Aralia nudicaulis</i>	<i>Eleocharis acicularis</i>	<i>Minuartia michauxii</i>
<i>Arctostaphylos uva-ursi</i>	<i>Eleocharis elliptica</i>	<i>Myosotis laxa</i>
<i>Asclepias incarnata</i>	<i>Eleocharis erythropoda</i>	<i>Myosotis scirpoides</i>
<i>Asclepias tuberosa</i>	<i>Eleocharis obtusa</i>	<i>Myrica gale</i>
<i>Aster crenifolius</i>	<i>Eleocharis smallii</i>	<i>Oenothera fruticosa</i>
<i>Aster puniceus</i>	<i>Equisetum arvense</i>	<i>Oenothera perennis</i>
<i>Aster tradescantii</i> (?)	<i>Erigeron strigosus</i>	<i>Onoclea sensibilis</i>
<i>Aster umbellatus</i>	<i>Eriocaulon septangulare</i>	<i>Osmunda claytoniana</i>
<i>Aster undulatus</i>	<i>Eriophorum alpinum</i>	<i>Osmunda regalis</i>
<i>    ula populifolia</i>	<i>Eupatorium maculatum</i>	<i>Oxalis stricta</i>
<i>Blomus kalmii</i>	<i>Eupatorium perfoliatum</i>	<i>Panicum acuminatum</i>
<i>Calamagrostis canadensis</i>	<i>Euthamia graminifolia</i>	<i>Panicum clandestinum</i>
<i>Calystegia sepium</i>	<i>Fragaria virginiana</i>	<i>Panicum dichotomiflorum</i>
<i>Campanula aparinoides</i>	<i>Fraxinus americana</i>	<i>Panicum linearifolium</i>
<i>Campanula rotundifolia</i>	<i>Galium mollugo</i>	<i>Parthenocissus</i> sp.
<i>Carex</i> (Sect. <i>Ovales</i> )	<i>Galium obtusum</i>	<i>Phalaris arundinacea</i>
<i>Carex aurea</i>	<i>Galium palustre</i>	<i>Phlox subulata</i>
<i>Carex baileyi</i>	<i>Geranium maculatum</i>	<i>Physocarpus opulifolius</i>
<i>Carex bebbii</i> (?)	<i>Glyceria striata</i>	<i>Pinus strobus</i>
* <i>Carex buxbaumii</i>	<i>Hedyotis caerulea</i>	<i>Platanthera flava</i> var. <i>herbiola</i>
<i>Carex conoidea</i>	<i>Helianthemum bicknellii</i>	<i>Poa compressa</i>
<i>Carex crinita</i>	<i>Helianthemum canadense</i>	<i>Poa palustris</i>
* <i>Carex cryptolepis</i>	<i>Helianthus divaricatus</i>	<i>Pogonia ophioglossoides</i>
<i>Carex echinata</i>	<i>Hieracium aurantiacum</i>	<i>Polygala polygama</i>
<i>Carex flava</i>	<i>Hieracium piloselloides</i>	<i>Polypodium virginianum</i>
<i>Carex gracillima</i>	<i>Hierochloe odorata</i>	<i>Pontederia cordata</i>
<i>Carex gynandra</i>	<i>Hydrocotyle americana</i>	<i>Populus deltoides</i>
<i>Carex laevivaginata</i>	<i>Hypericum mutillum</i>	<i>Populus grandidentata</i>
<i>Carex lenticularis</i>	<i>Hypericum canadense</i>	<i>Populus tremuloides</i>
<i>Carex leptalea</i>	<i>Hypericum perforatum</i>	<i>Potamogeton gramineus</i>
<i>Carex lurida</i>	<i>Ilex verticillata</i>	<i>Potentilla arguta</i>
<i>Carex pensylvanica</i>	<i>Impatiens capensis</i>	<i>Potentilla canadensis</i>
<i>Carex rostrata</i>	<i>Iris versicolor</i>	<i>Potentilla fruticosa</i>
<i>Carex stipata</i>	<i>Juncus acuminatus</i>	<i>Potentilla norvegica</i>
<i>Carex stricta</i>	<i>Juncus articulatus</i>	<i>Potentilla simplex</i>
<i>    x torta</i>	<i>Juncus brachycephalus</i>	<i>Prunella vulgaris</i>

\* *Prunus pumila* var. *depressa*  
*Prunus virginiana*  
*Pycnanthemum tenuifolium*  
*Pycnanthemum virginianum*  
*Quercus rubra*  
*Ranunculus reptans*  
*Rhus typhina*  
*Rhynchospora capitellata*  
*Rosa blanda*  
*Rosa carolina*  
*Rubus flagellaris*  
*Rubus odoratus*  
*Rudbeckia serotina*  
*Rumex acetosella*  
*Sagittaria graminea*  
*Sagittaria latifolia*  
*Salix eriocephala*  
*Salix petiolaris*  
*Salix sericea*  
*Sanguisorba canadensis*  
*Saponaria officinalis*  
*Satureja vulgaris*  
*Saxifraga virginiana*  
*Schizachyrium scoparium*  
*Scirpus atrocinctus*

*Scirpus atrovirens*  
 \* *Scirpus clintonii*  
*Scirpus cyperinus*  
*Scirpus microcarpus*  
*Scirpus pendulus*  
*Scirpus rubrotinctus*  
 \* *Scleria triglomerata*  
*Sedum telephium*  
*Selaginella rupestris*  
*Sisyrinchium atlanticum*  
*Sisyrinchium montanum*  
*Smilax herbacea*  
*Smilacina stellata*  
*Solidago gigantea*  
*Solidago juncea*  
*Solidago nemoralis*  
*Solidago rugosa*  
*Sorghastrum nutans*  
*Spiraea latifolia*  
*Spiraea tomentosa*  
*Spiranthes cernua*  
*Spiranthes lucida*  
*Taxus canadensis*  
*Thalictrum pubescens*  
*Thelypteris palustris*  
*Thuja occidentalis*

*Tilia americana*  
 \* *Tofieldia glutinosa*  
*Torreyochloa pallida*  
*Toxicodendron radicans*  
*Triadenum virginianum*  
*Trifolium aureum*  
*Tsuga canadensis*  
*Ulmus americana*  
*Utricularia cornuta*  
*Vaccinium angustifolium*  
     var. *angustifolium*  
     var. *nigrum*  
*Vaccinium macrocarpon*  
*Vaccinium pallidum*  
*Veratrum viride*  
*Verbascum thapsus*  
*Verbena hastata*  
*Vicia cracca*  
*Viola fimbriatula*  
 \* *Viola nephrophylla* (?)  
 \* *Viola novae-angliae*  
*Viola septentrionalis*  
*Viola sororia*  
*Vitis riparia*  
*Xyris torta*  
*Zizia aurea*

## Annual NYFA Meetings and Second 1991 Field Trip September 21-22, 1991 -- Long Island --

The second annual meeting of NYFA will be held at the Uplands Farm Preserve of the Nature Conservancy in Cold Spring Harbor, Long Island. A picnic dinner will be held at the preserve at 6 p.m., followed by the meeting, beginning about 7 p.m. Tenting will be permitted at the preserve, and there are a limited number of beds available.

On Sunday, Sept. 22, our 5th semi-annual field trip will be held in the Long Island Pine Barrens. We will meet at 10 a.m. at the parking lot of the Mobil gas station at Exit 70 off the L. I. Expressway (Rt. 495). We will visit a series of ponds within the pine barrens and hopefully see *Sagittaria teres*, *Psilocarya nitens* and *Coreopsis rosea*. We will proceed to an abandoned cranberry bog and cedar swamp in Riverhead, seeing *Eleocharis equisetoides*, *Rhynchospora inundata*, and several species of *Utricularia* and *Lycopodium*. The trip will end at the dwarf pine barrens in Westhampton. Try not to miss it. We'll see you there!

For directions and information on housing, etc., call Bob Zaremba at (518) 869-6959